

MONTHLY WEATHER REVIEW,

AUGUST, 1878.

WAR DEPARTMENT,

Office of the Chief Signal Officer,

DIVISION OF

TELEGRAMS AND REPORTS FOR THE BENEFIT OF COMMERCE AND AGRICULTURE.

INTRODUCTION.

In compiling the present REVIEW the following data, received up to September 14th, have been made use of, viz: the regular tri-daily weather charts, containing the data of simultaneous observations taken at 118 Signal Service stations and 12 Canadian stations, as telegraphed to this office; monthly journals and means, 122 and 139 respectively, from the former, and monthly means from 13 of the latter; reports from 22 special Sunset stations; 240 monthly registers from Voluntary Observers; 48 monthly registers from United States Army Post Surgeons; Marine Records; International Simultaneous Observations; monthly reports of the Weather Services of the States of Iowa and Missouri; reliable newspaper extracts; special reports.

BAROMETRIC PRESSURE.

Upon chart No. II is shown the general distribution of the atmospheric pressure for the month by the isobaric lines. Compared with the means for August of previous years, the pressure of the present month is decidedly lower in all sections, except in the extreme Northwest and at the Rocky Mountain and Pacific coast stations, where it is slightly above the normal.

The Local Barometric Ranges, as reduced to sea-level, for the month, vary as follows: New England, from 0.66 of an inch at Newport and New London to 0.76 at Eastport and 0.77 at Mt. Washington; Middle Atlantic States, 0.43 at Lynchburg to 0.68 at Albany; South Atlantic States, 0.30 at Jacksonville to 0.47 at Cape Hatteras; Gulf States, 0.25 at New Orleans to 0.28 at Key West, 0.31 at Mobile and Corsicana, and 0.21 at Galveston; Ohio valley and Tennessee, 0.30 at Louisville to 0.50 at Pittsburg; Lower Lake region, 0.39 at Sandusky to 0.61 at Oswego; Upper Lake region, 0.34 at Chicago to 0.61 at Alpena; Upper Mississippi valley, 0.28 at St. Louis to 0.57 at St. Paul; Red River of the North valley, 0.60 at Pembina to 0.67 at Breckenridge; Missouri valley, 0.52 at Bismarck to 0.57 at Yankton; Plains of Nebraska and Kansas, 0.64 at Dodge City to 0.72 at North Platte; Rocky Mountains, 0.25 at Pike's Peak to 0.44 at Denver; Utah, 0.38 at Salt Lake City; Idaho Territory, 0.55 at Boise City; Montana Territory, 0.39 at Virginia City; Nevada, 0.31 at Pioche to 0.45 at Winnemucca; California, 0.37 at San Diego to 0.53 at Red Bluff; Oregon, 0.53 at Portland to 0.54 at Roseburg.

Areas of High Barometer.—Six have been sufficiently well marked to justify a brief description: two of them, Nos. II and IV, moved southward along the Atlantic sea-board, while the other four were mostly confined to the Northwest and eastern slope of the Rocky Mountains. The heavy rains or "cloud bursts" in the mountains of Colorado and New Mexico occurred while high pressures were to the north of this section as follows: The heavy rains of the 10th in New Mexico on the approach of area No. I; of the evenings of the 23d and 24th in Colorado and New Mexico on the approach of No. V, and of the 27th in southern Colorado on the approach of No. VI.

No. I.—This area appeared on the Pacific coast on the morning of the 8th, and probably took the course indicated by the following barometric readings: 8th, a. m. barometers at Olympia, W. T., and Portland, Or., respectively, 30.11 and 30.18, or 0.14 and 0.11 in. above normal. 9th, a. m. barometers at Olympia and Virginia City, Mont. T., 30.13 and 29.91 or 0.16 and 0.10 in. above normals. 10th, a. m. barometers at Virginia City and North Platte, 29.93 and 29.72 or 0.13 and 0.17 in. above normals, following closely in rear of low-pressure area No. V, with lower temperatures and clearing weather. 11th, a. m. barometers at North Platte, Dodge City, and Santa Fé, 29.80, 29.82 and 30.03, or 0.21, 0.20 and 0.18 above